Car audio system

CE130/55/51, CE130X/78

Service
Service
Service

Service Manual

MAX SOUND DBB MP3 Plays Windows Media™ USB DIRECT SD™

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CLASS 1
LASER PRODUCT

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3141 785 35401

Version 1.1

PHILIPS

TECHNICAL SPECIFICATION

Display
- Type: High contrast B/W LCD (8 characters)
- Key illumination: Red

Audio Playback
- Playback Media: USB flash drive, SD Card
- Compression format: MP3, WMA
- ID3 Tag support: Song title, artist, album
- MP3 bit rates: 32-320kbps and variable bit rate
- USB Direct / SD Modes: Play/Pause, Fast Backward/Fast Forward, Previous/Next, Repeat, Shuffle

Tuner/Reception/Transmission
- Tuner Bands: AM, FM Stereo
- Auto digital tuning
- Tuner Enhancements: Auto search and store
- No. of preset stations: 18(FM), 12(AM)

Sound
- Equalizer: 2-bands
- Equalizer settings: Classic, Jazz, Pop, Rock, Flat, Optimal, Techno, User defined
- Sound Enhancement: MAX Sound, Dynamic Bass Boost
- Output power (MAX): 45Wx4 channels
- Output power (RMS): 22Wx4 channels (4 ohms, 10% T.H.D.)

Connectivity
- USB: USB 2.0 Host
- Memory card: SD, SDHC
- MP3-Link: For portable MP3 music playback
- Preamp output: 2 pairs RCA(L/R)

Security/Anti-thief
- Front panel: Detachable
- Display blackout: 10/20 sec selectable

Accessories
- Remote control: Not included
- User Manual: Brazilian Portuguese
- Quick start guide: Brazilian Portuguese

Power
- Power supply: 12V DC

Dimensions
- Product dimensions (W x H x D): 188 x 58 x 140 mm
- Chassis: 1 Din

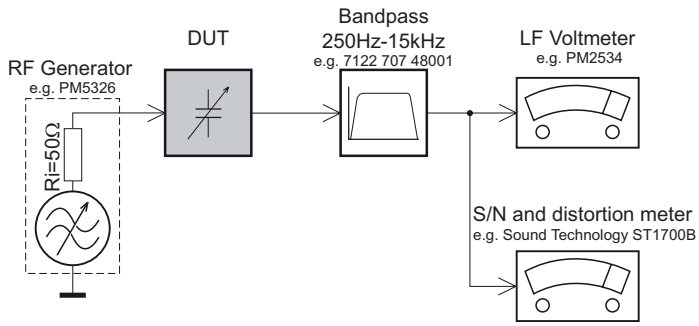
VERSION VARIATION

Type /Versions: / Board in used: / Service policy	CE130									
	/51	/12		/55	/58	/61		/93		/98
Tuner BOARD	C&M			C&M						
Main BOARD	C&M			C&M						
Type /Versions: / Features / Feature diffrence	CE130									
								/93		
RDS										
VOLTAGE SELECTOR										
ECO STANDBY - DARK										

* TIPS : C -- Component Lever Repair.
M -- Module Lever Repair
√ Used

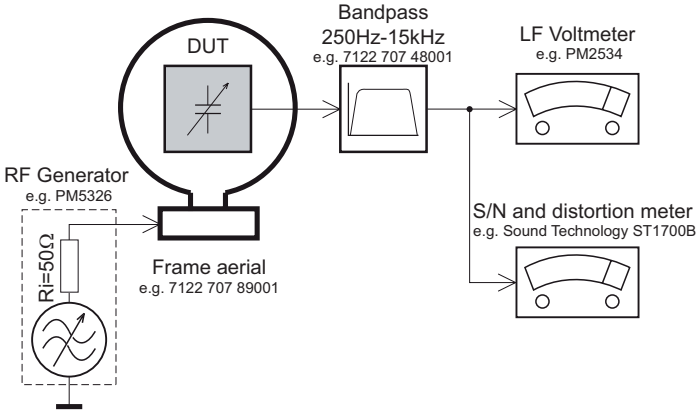
MEASUREMENT SETUP

Tuner FM



Use a bandpass filter to eliminate hum (50Hz, 100Hz) and disturbance from the pilottone (19kHz, 38kHz).

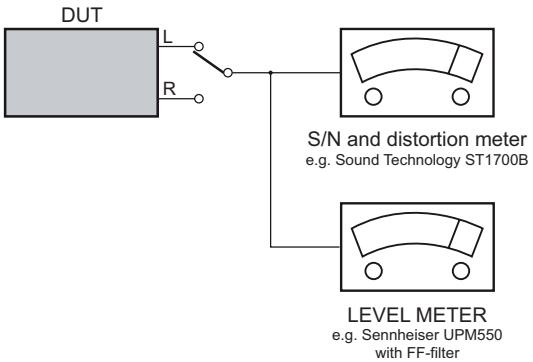
Tuner AM (MW,LW)



To avoid atmospheric interference all AM-measurements have to be carried out in a Faraday´s cage.
Use a bandpass filter (or at least a high pass filter with 250Hz) to eliminate hum (50Hz, 100Hz).

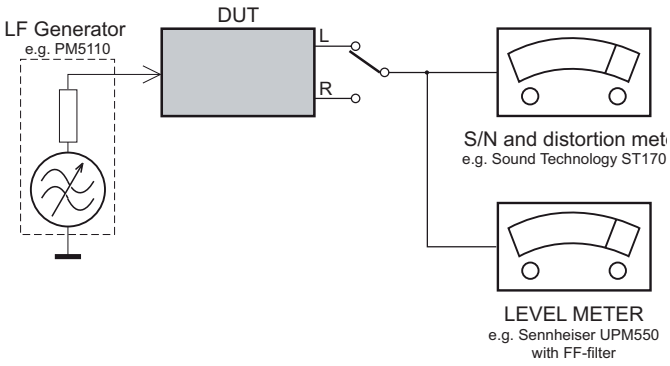
CD

Use Audio Signal Disc SBC429 4822 397 30184
(replaces test disc 3)



Recorder

Use Universal Test Cassette **CrO2** SBC419 4822 397 30069
or Universal Test Cassette **Fe** SBC420 4822 397 30071



SERVICE AIDS

GB WARNING

All ICs and many other semi-conductors are susceptible to electrostatic discharges (ESD). Careless handling during repair can reduce life drastically.
When repairing, make sure that you are connected with the same potential as the mass of the set via a wrist wrap with resistance. Keep components and tools also at this potential.

ESD

GB

Safety regulations require that the set be restored to its original condition and that parts which are identical with those specified, be used

Safety components are marked by the symbol ⚠.

CLASS 1
LASER PRODUCT

INFORMATION ABOUT LEAD-FREE SOLDERING

Philips CE is producing lead-free sets from 1.1.2005 onwards.
IDENTIFICATION:

Regardless of special logo (not always indicated) one must treat all sets from 1 Jan 2005 onwards, according next rules:

- On our website **www.atyourservice.ce.Philips.com** you find more information to:
  - BGA-de-/soldering (+ baking instructions)
  - Heating-profiles of BGAs and other ICs used in Philips-sets
  - Lead free

  You will find this and more technical information within the "magazine", chapter "workshop news".

For additional questions please contact your local repair-helpdesk.

SERVICE INSTRUCTION

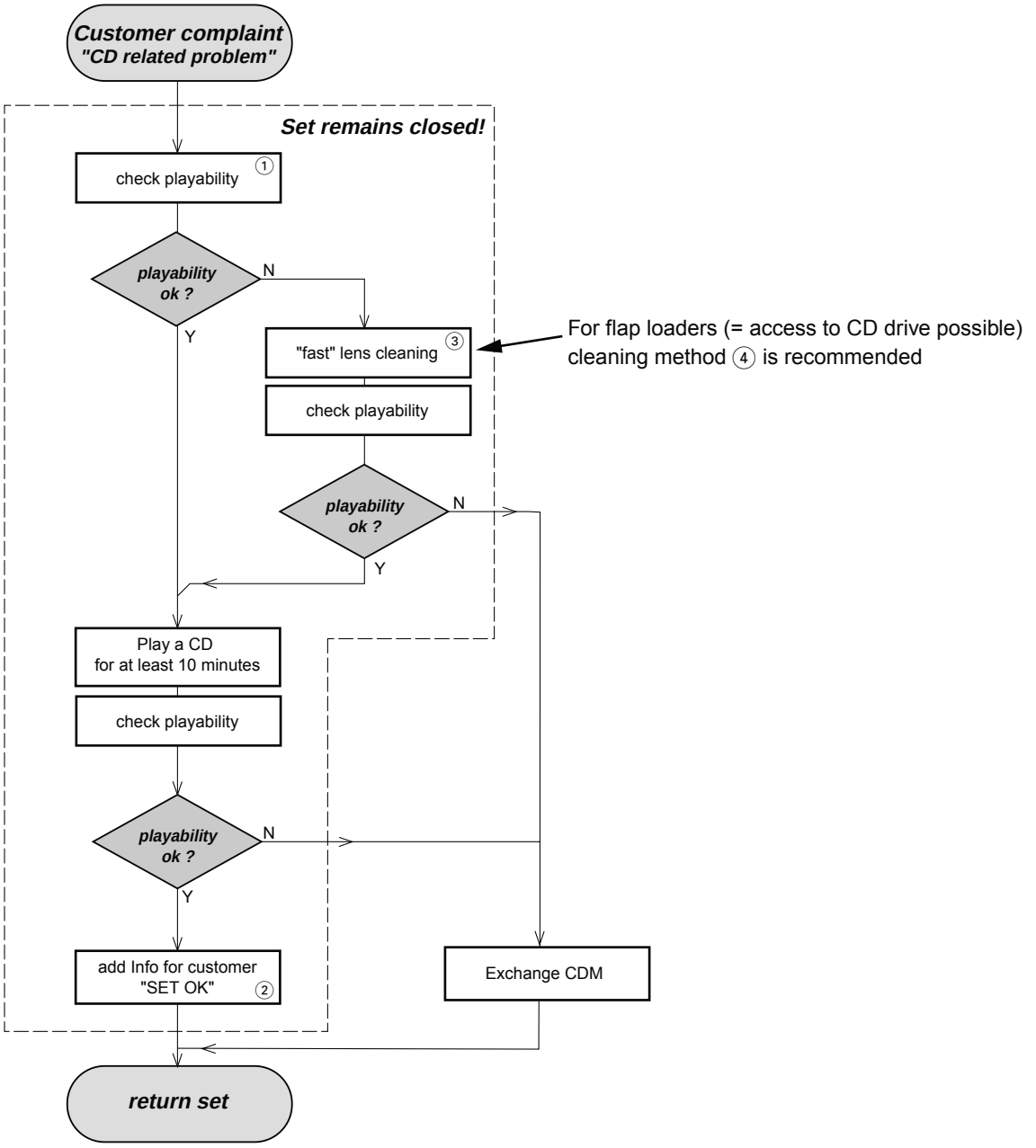
Safety regulations require that after a repair, the set must be returned in its original condition. Pay in particular attention to the following points:

- Route the wire trees correctly and fix them with the mounted cable clamps.
- Check the insulation of the AC Power lead for external damage.
- Check the strain relief of the AC Power cord for proper function.
- Check the electrical DC resistance between the AC Power Plug and the secondary side (only for sets which have a AC Power isolated power supply):

1. Unplug the AC Power cord and connect a wire between the two pins of the AC Power plug.
2. Set the AC Power switch to the "on" position (keep the AC Power cord unplugged!).
3. Measure the resistance value between the pins of the AC Power plug and the metal shielding of the tuner or the aerial connection on the set. The reading should be larger than 4.5 Mohm (For U.S. it should be between 4.2 Mohm and 12 Mohm).
4. Switch "off" the set, and remove the wire between the two pins of the AC Power plug.

- Check the cabinet for defects, to avoid touching of any inner parts by the customer.

INSTRUCTIONS ON CD PLAYABILITY



① - ④ For description - see following pages

INSTRUCTIONS ON CD PLAYABILITY

①

PLAYABILITY CHECK

For sets which are compatible with **CD-RW** discs
use CD-RW Printed Audio Disc.....7104 099 96611
TR 3 (Fingerprint)
TR 8 (600µ Black dot) **maximum at 01:00**

- playback of these two tracks without audible disturbance
  playing time for: Fingerprint ≥10seconds
  Black dot from 00:50 to 01:10
- jump forward/backward (search) within a reasonable time

For all other sets
use CD-DA SBC 444A.....4822 397 30245
TR 14 (600µ Black dot) **maximum at 01:15**
TR 19 (Fingerprint)
TR 10 (1000µ wedge)

- playback of all these tracks without audible disturbance
  playing time for: 1000µ wedge ≥10seconds
  Fingerprint ≥10seconds
  Black dot from 01:05 to 01:25
- jump forward/backward (search) within a reasonable time

②

CUSTOMER INFORMATION

It is proposed to add an addendum sheet to the set which informs the customer that the set has been checked carefully - but no fault was found.
The problem was obviously caused by a scratched, dirty or copy-protected CD. In case problems remain, the customer is requested to contact the workshop directly.
The lens cleaning (method ③) should be mentioned in the addendum sheet.

The final wording in national language as well as the printing is under responsibility of the Regional Service Organizations.

④

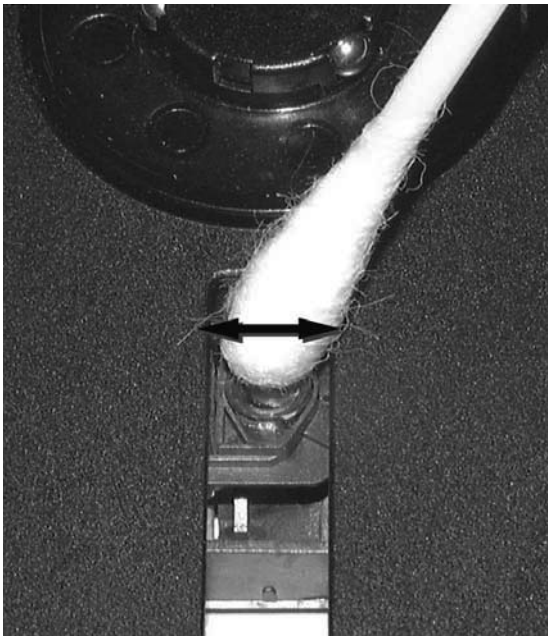
LIQUID LENS CLEANING

Before touching the lens it is advised to clean the surface of the lens by blowing clean air over it. This to avoid that little particles make scratches on the lens.

Because the material of the lens is synthetic and coated with a special anti-reflectivity layer, cleaning must be done with a non-aggressive cleaning fluid. It is advised to use “Cleaning Solvent

The actuator is a very precise mechanical component and may not be damaged in order to guarantee its full function. Clean the lens gently (don’t press too hard) with a soft and clean cotton bud moistened with the special lens cleaner.

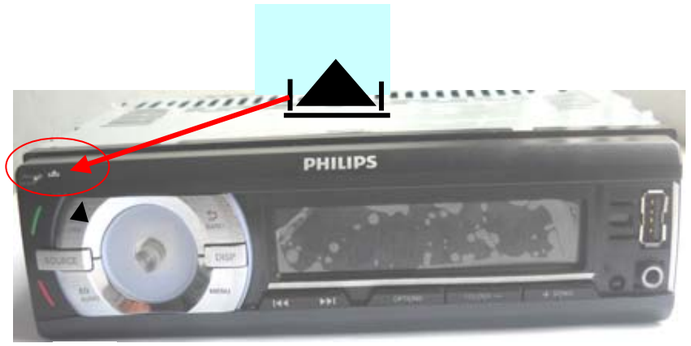
The direction of cleaning must be in the way as indicated in the picture below.



DISMANTLING INSTRUCTIONS

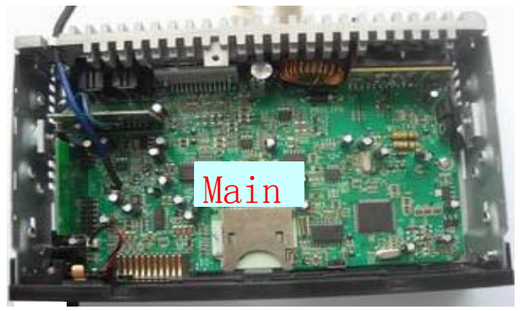
Note:put on static belt during operation and keep yourself from electronic screw driver static.

1) Detach the the panel by press push button ⏏ on it.
2) Remove screw on cover "A"
3) Remove cover on unit



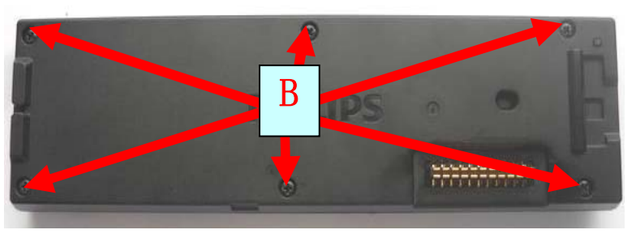
1

2

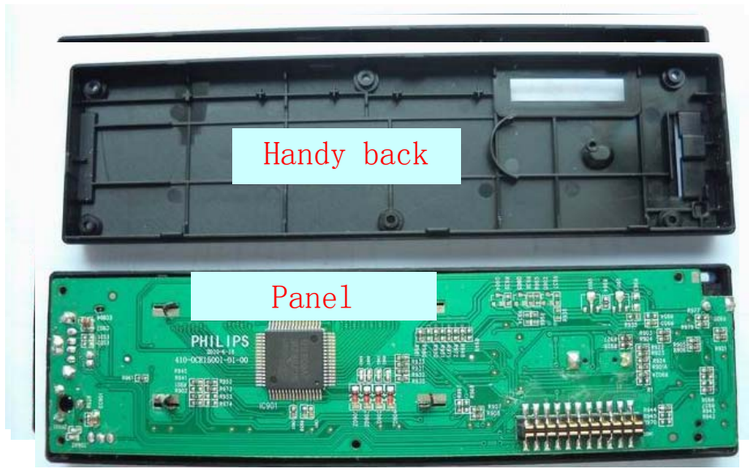


3

4) Remove 6pcs 2X6BTP screw on panel button cover'B'
5) Detach the button cover

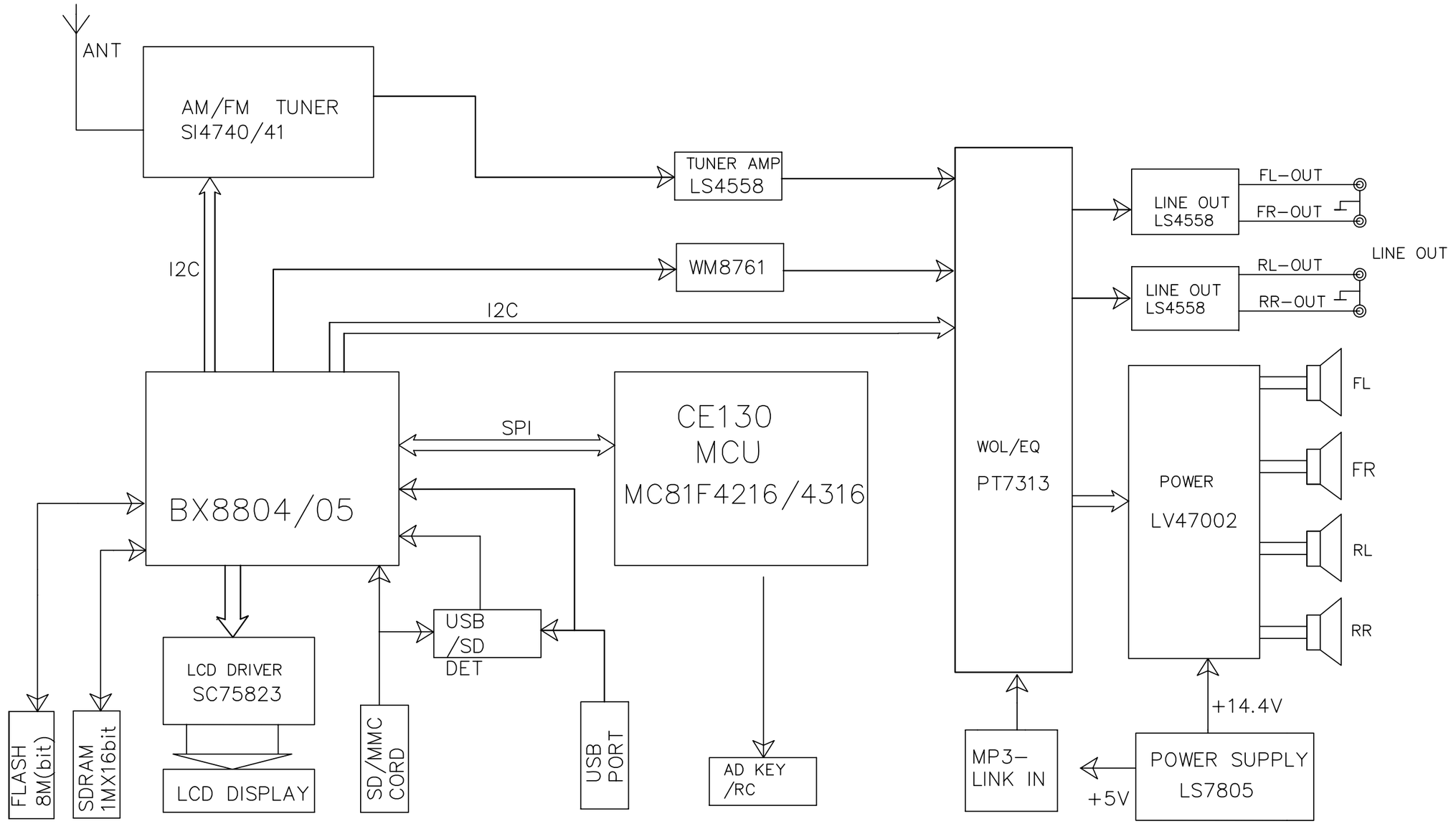


4

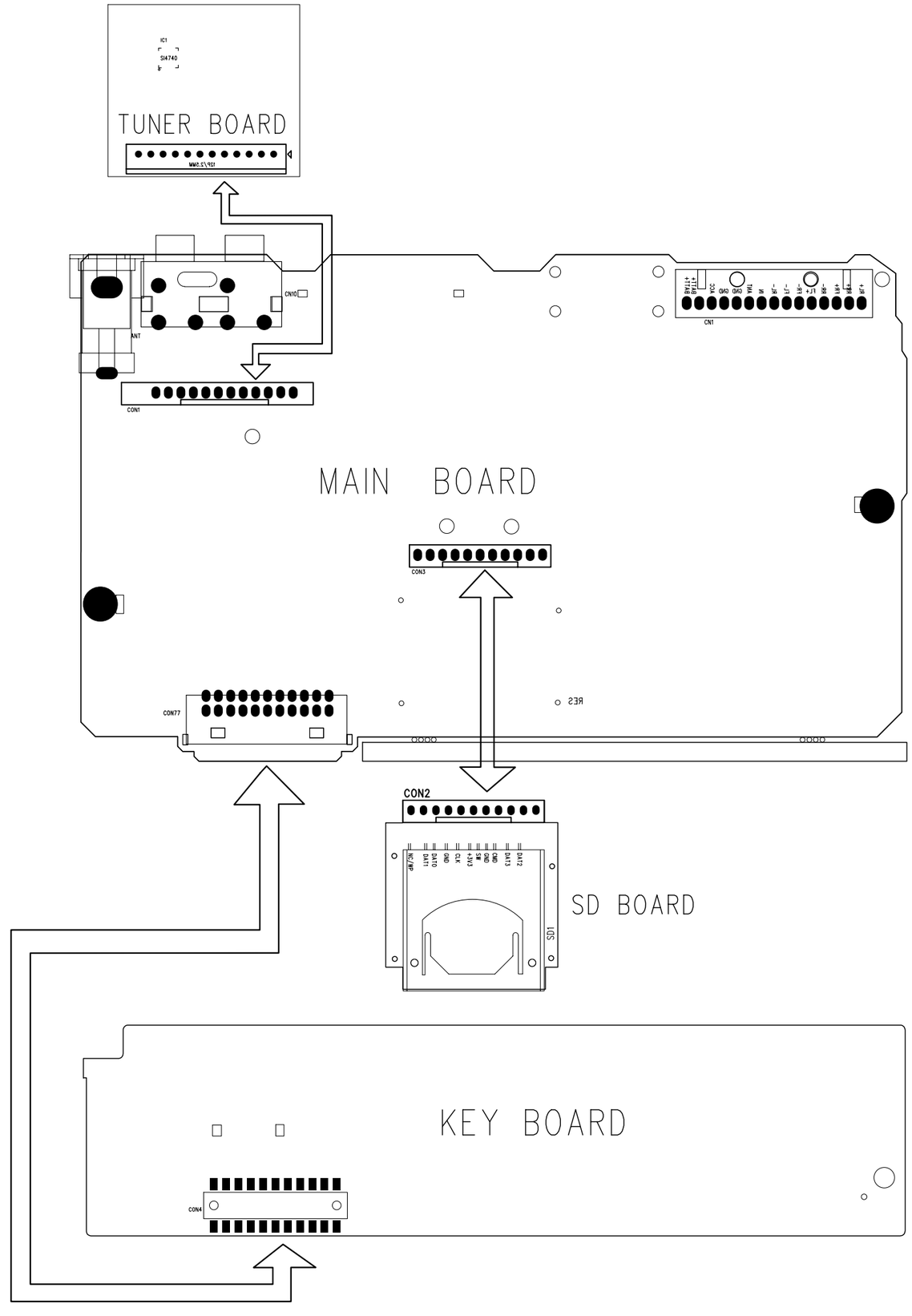


5

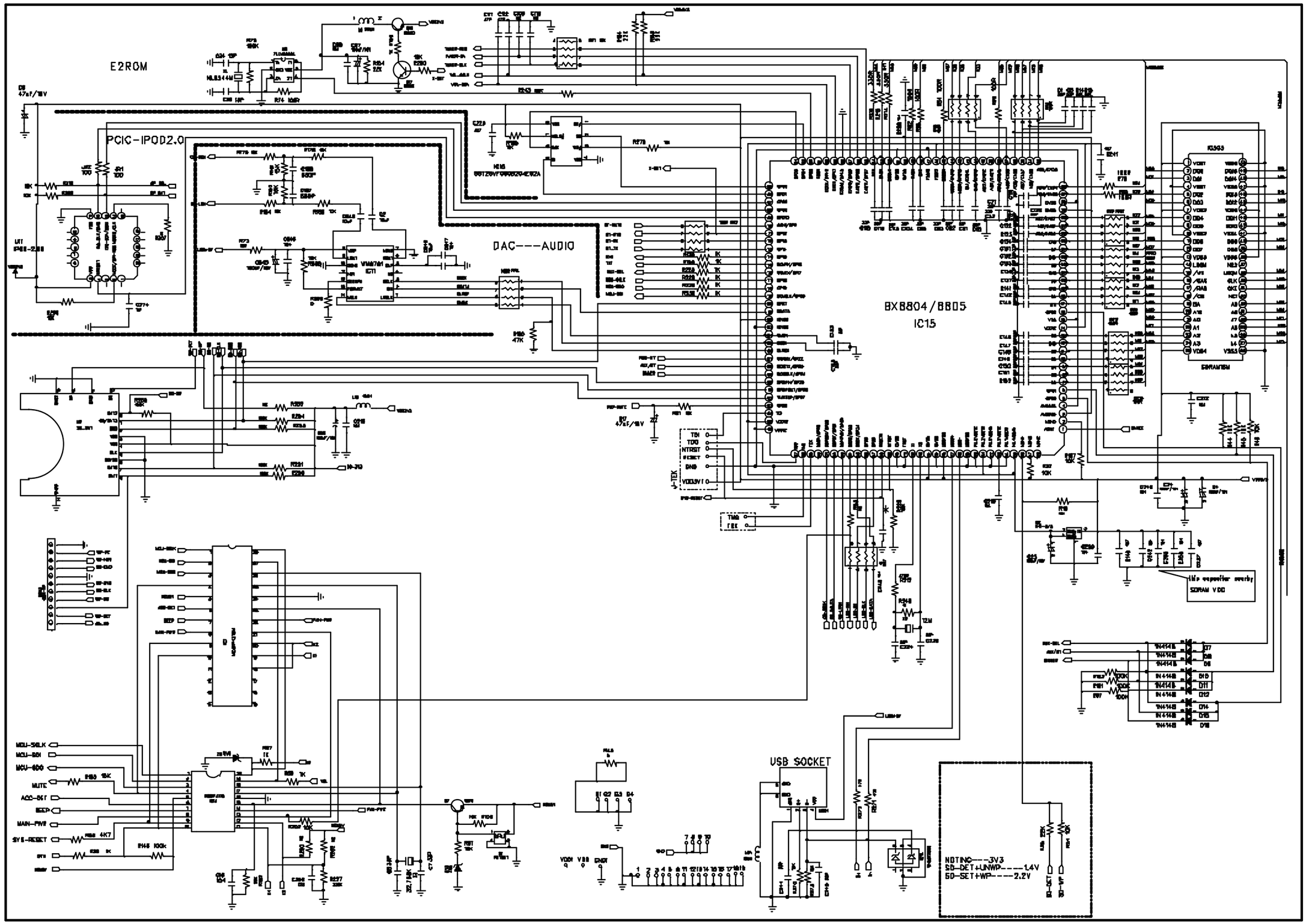
BLOCK DIAGRAM



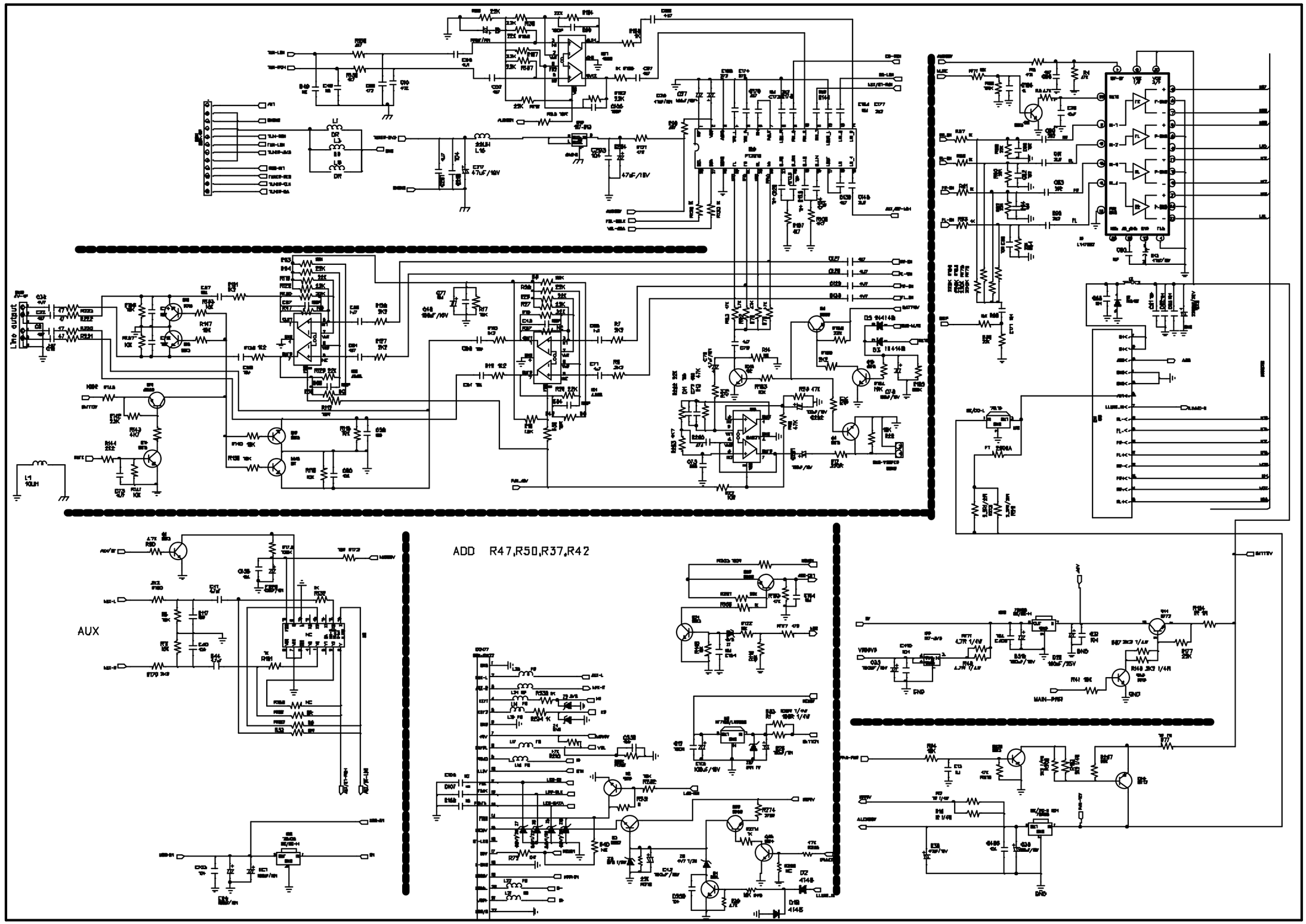
WIRING DIAGRAM



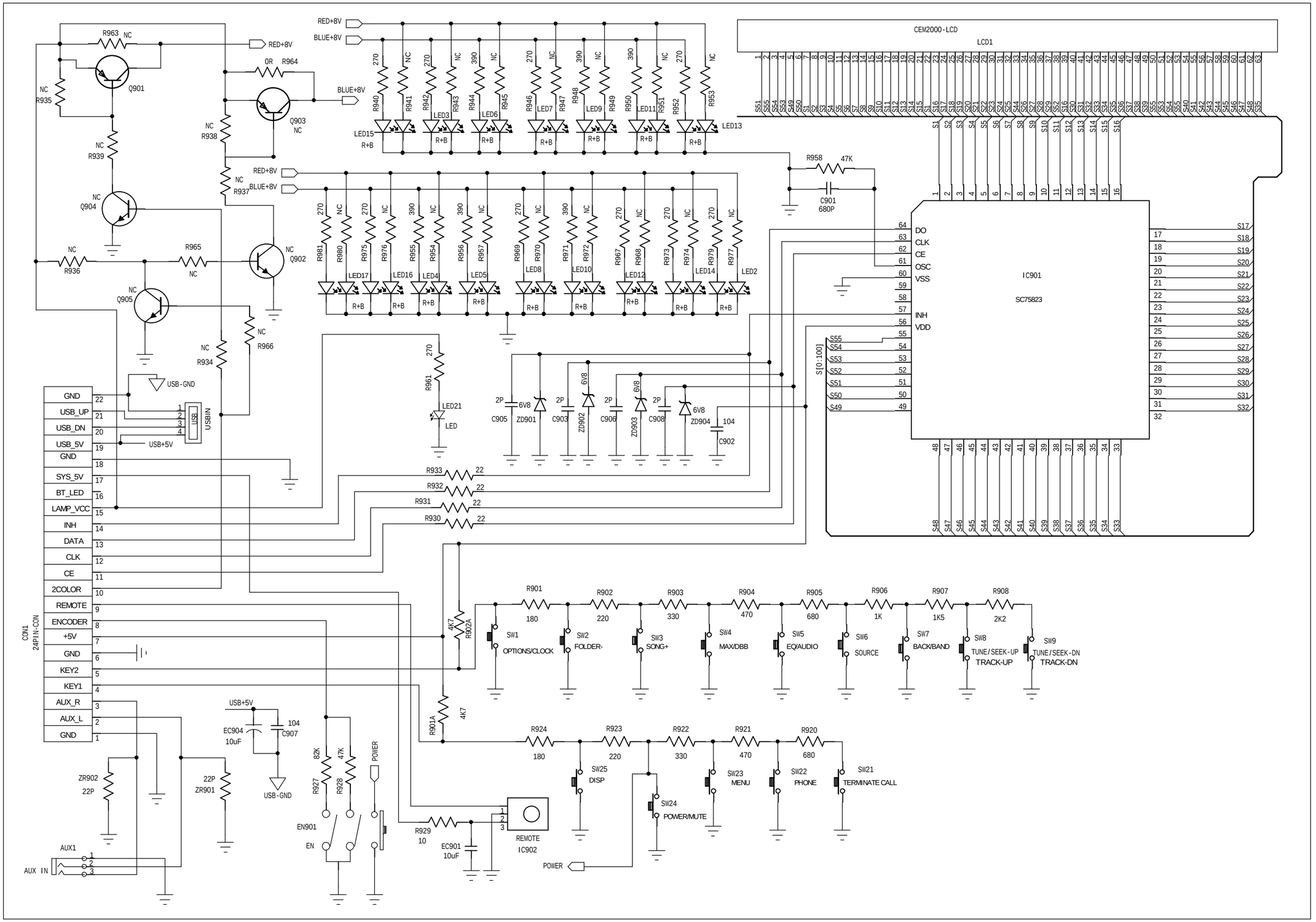
CIRCUIT DIAGRAM MAIN BOARD



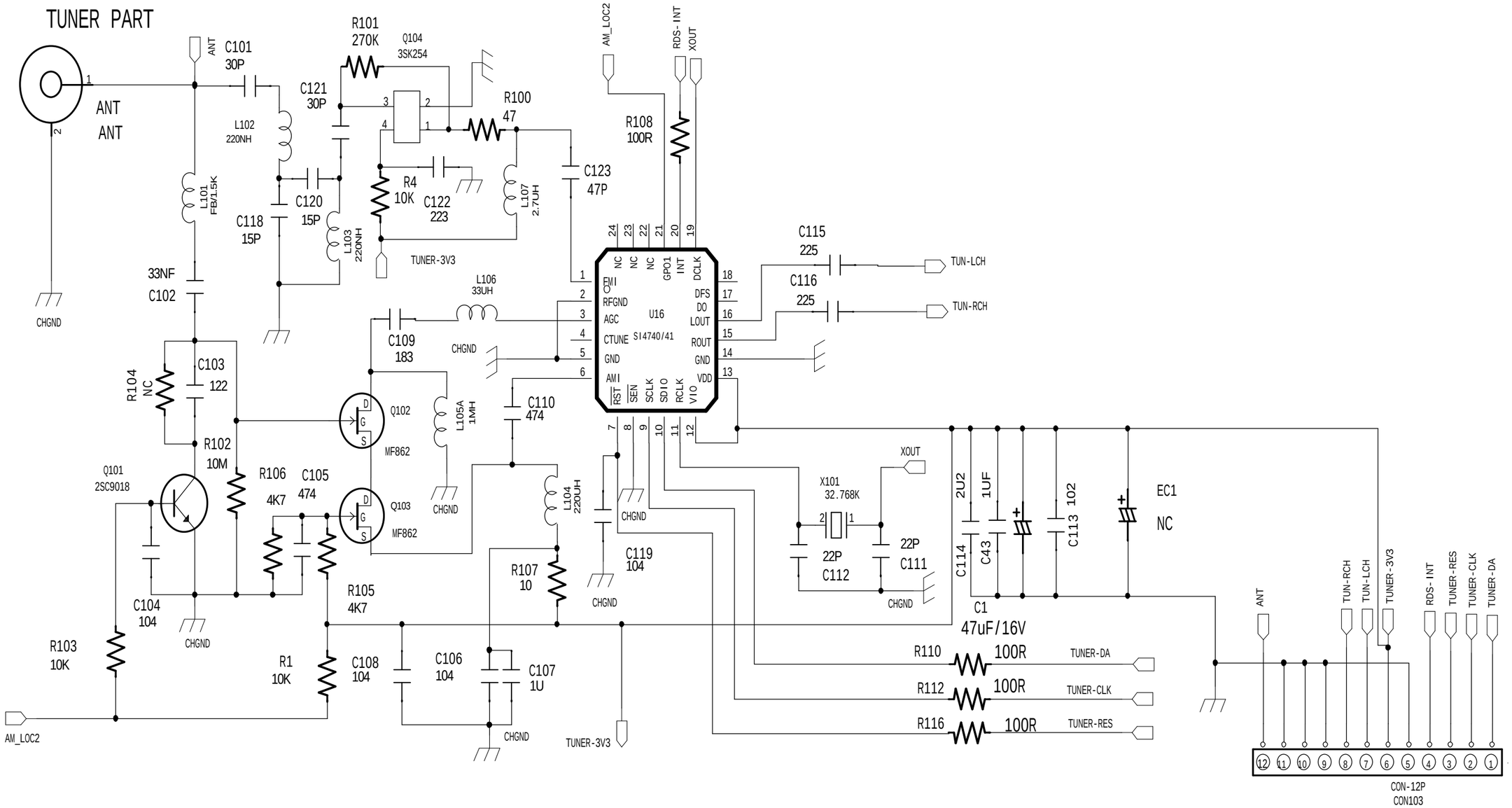
CIRCUIT DIAGRAM MAIN BOARD



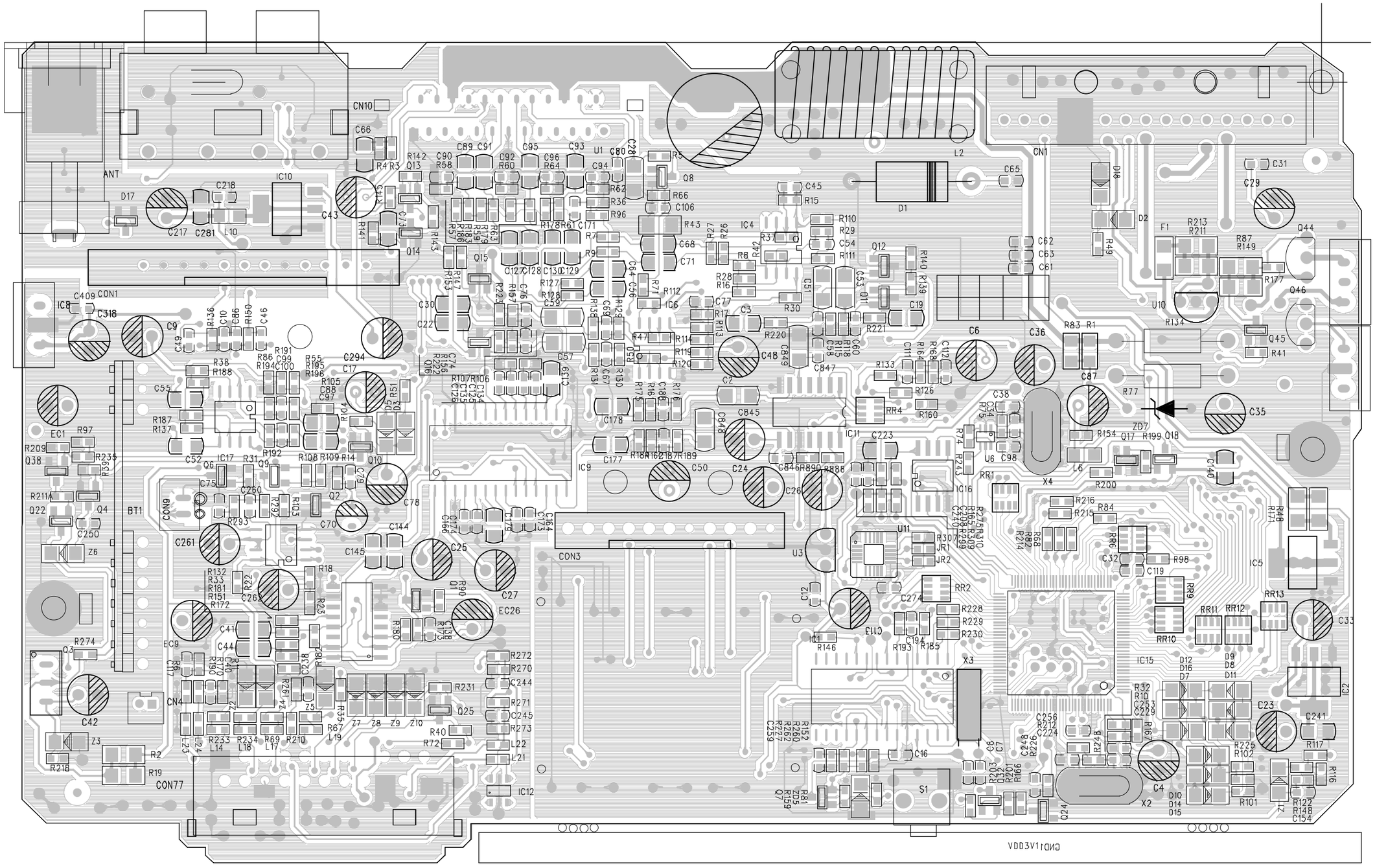
CIRCUIT DIAGRAM PANEL BOARD



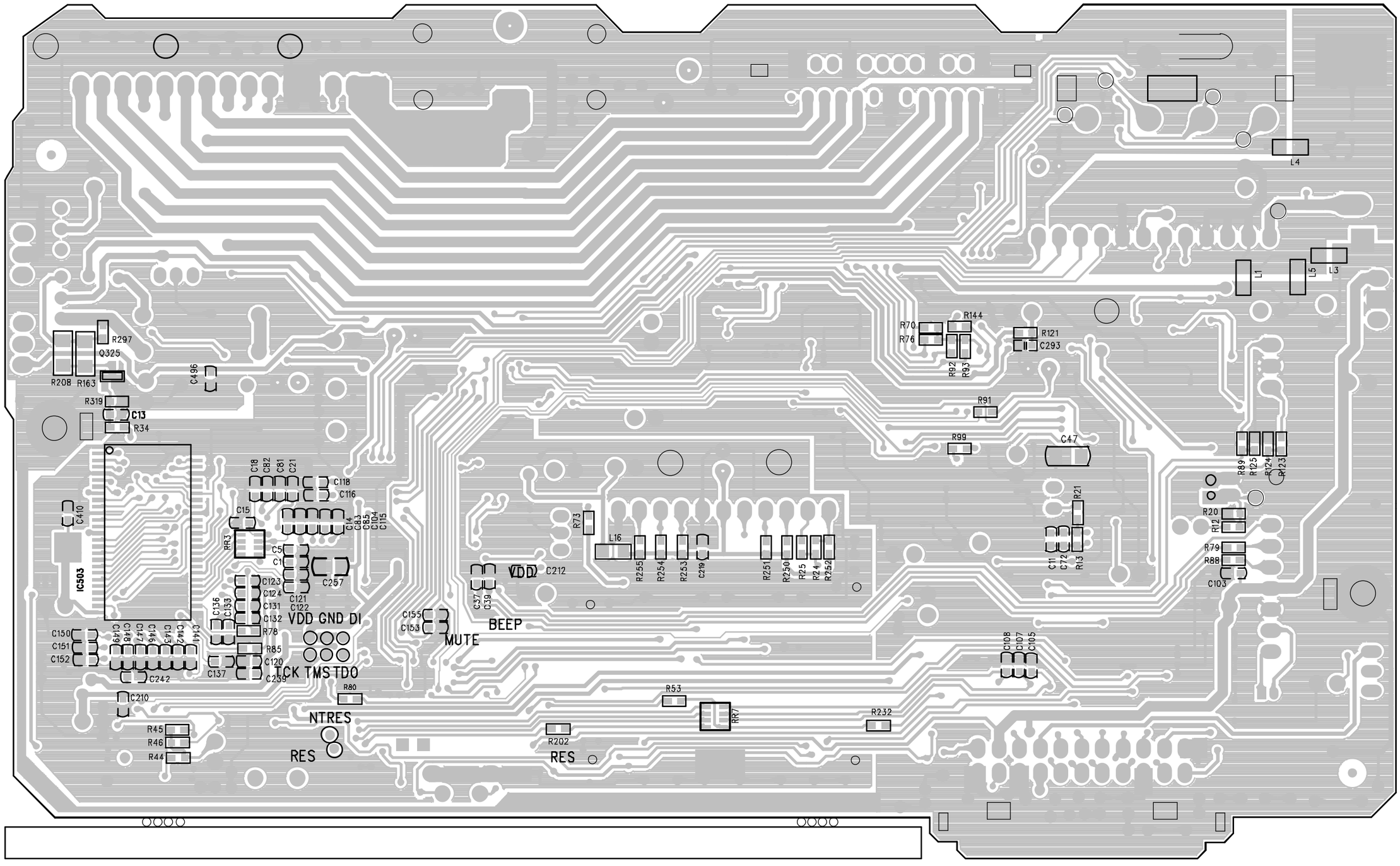
CIRCUIT DIAGRAM TUNER BOARD



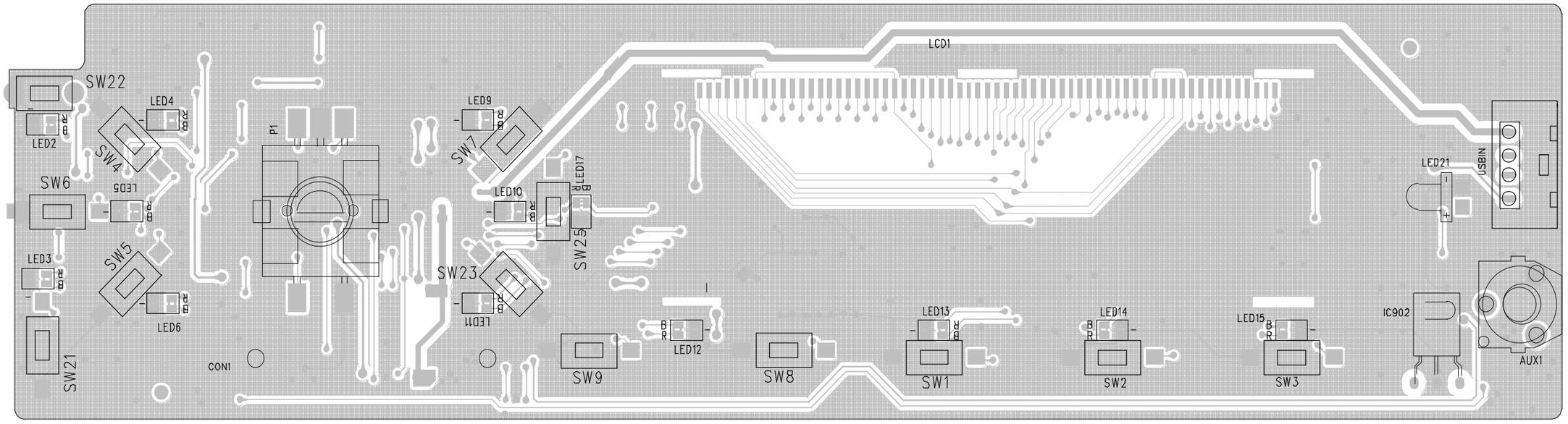
MAIN PCB COMPONENT LAYOUT TOP SIDE VIEW



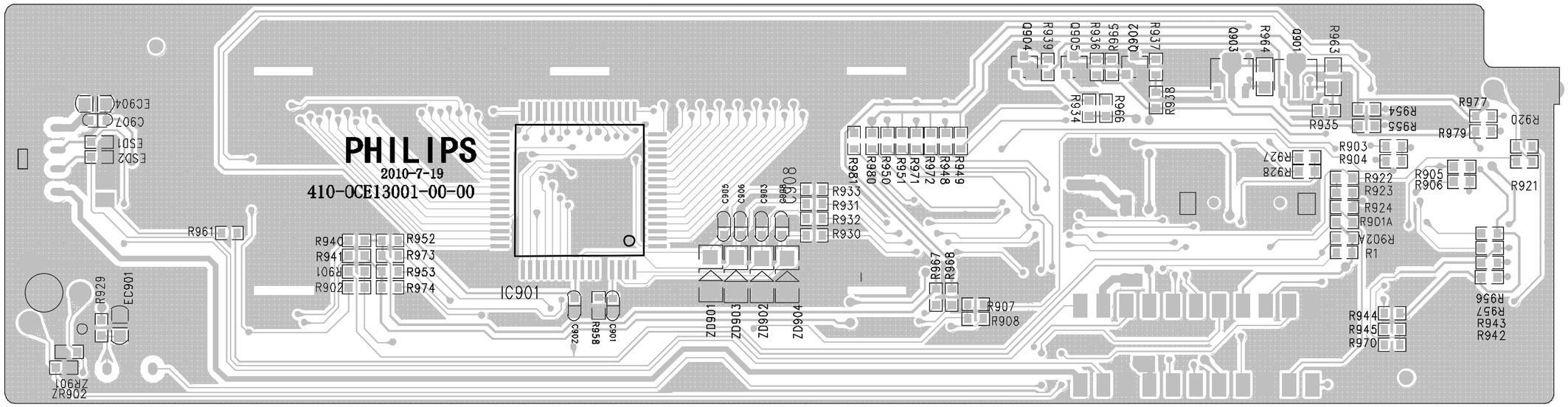
MAIN PCB COMPONENT LAYOUT BOTTOM SIDE VIEW



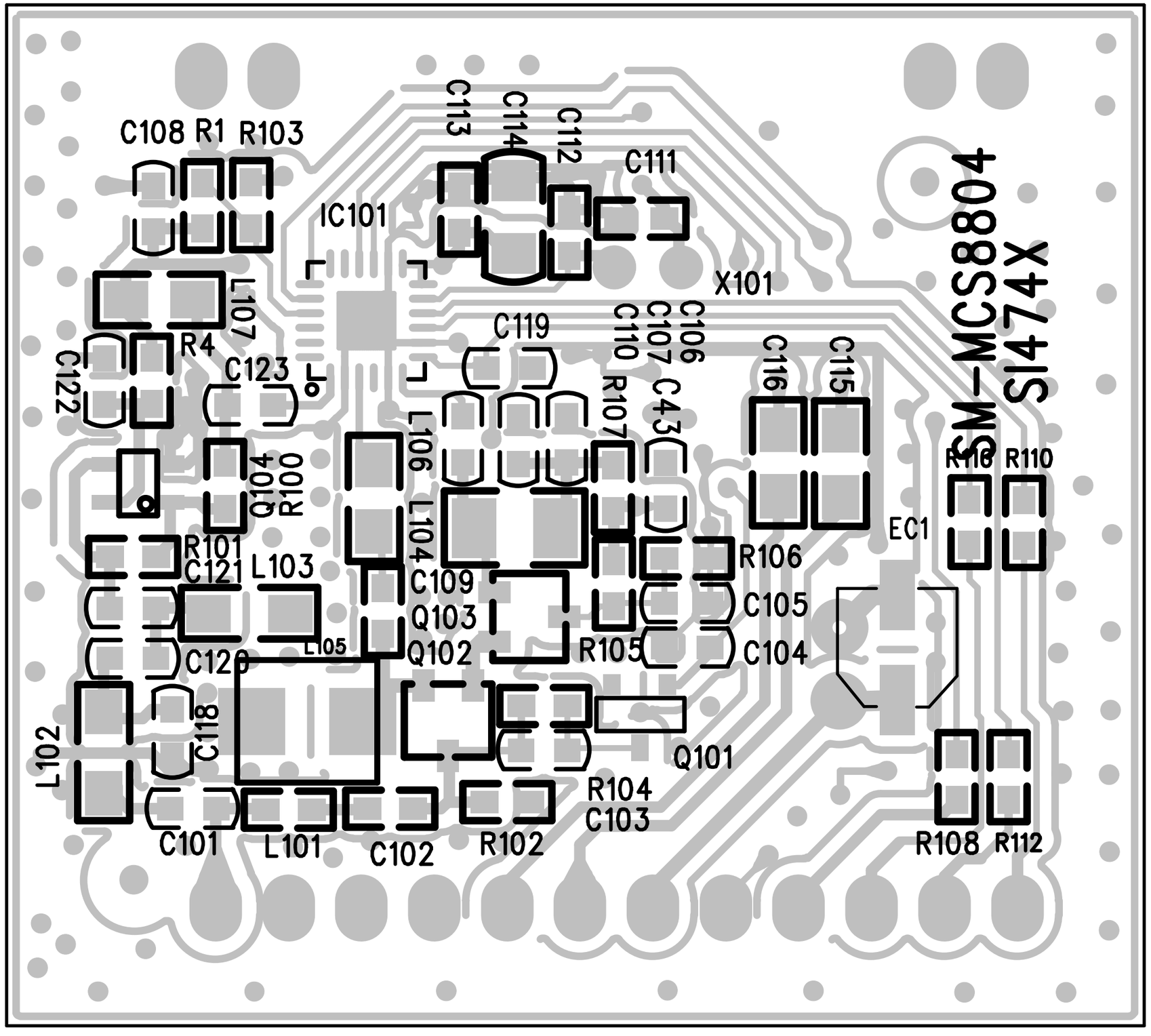
PANEL PCB COMPONENT LAYOUT TOP SIDE VIEW



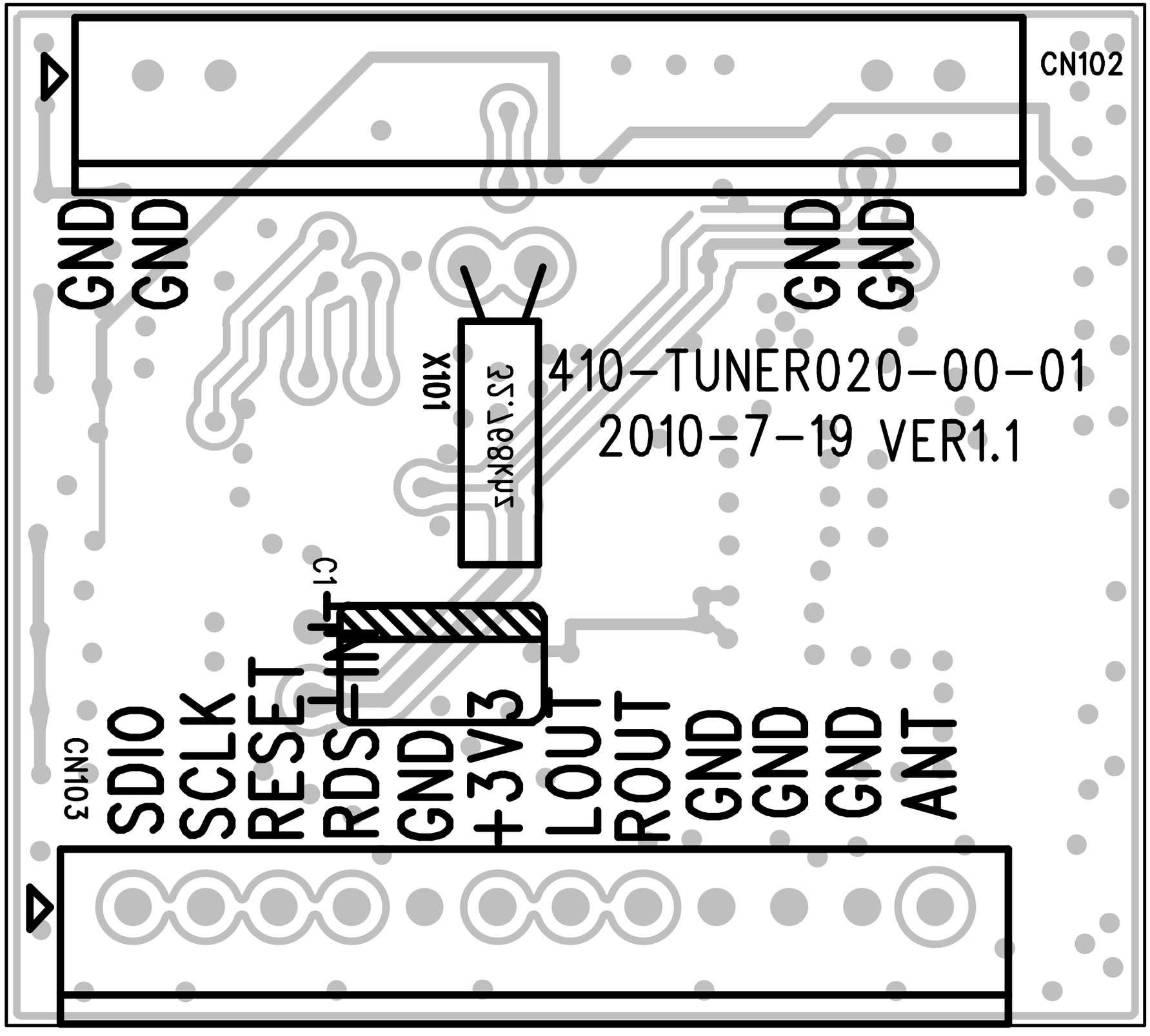
PANEL PCB COMPONENT LAYOUT BOTTOM VIEW



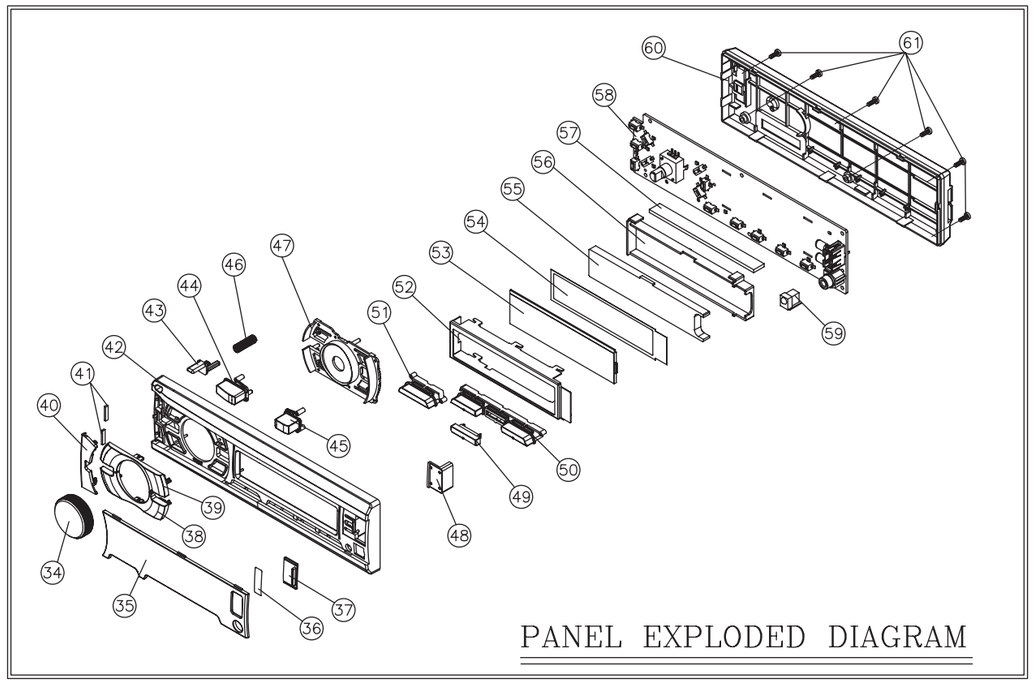
TUNER PCB COMPONENT LAYOUT TOP SIDE VIEW



TUNER PCB COMPONENT LAYOUT BOTTOM SIDE VIEW

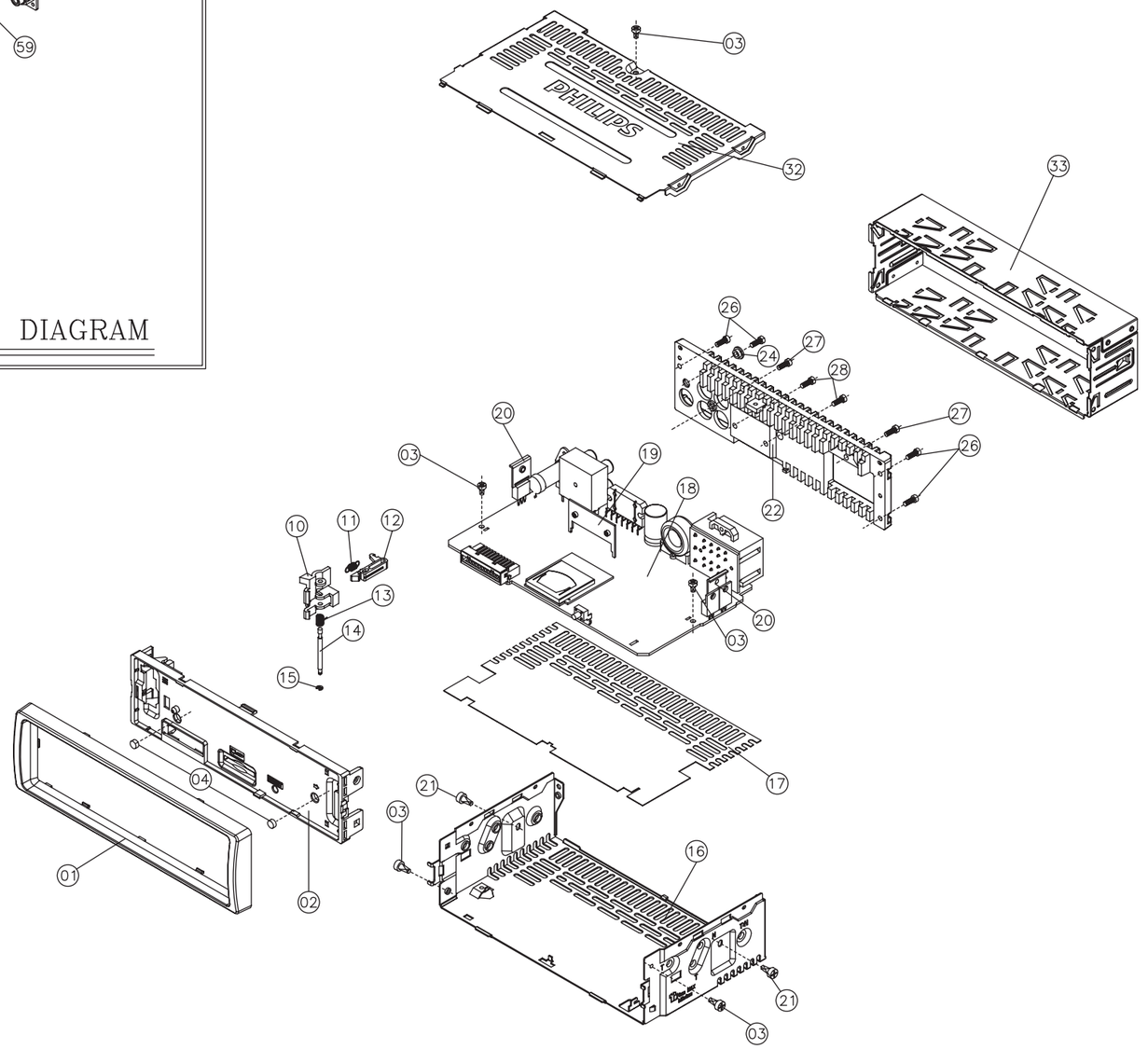


SET EXPLODER VIEW DRAWING



PANEL EXPLODED DIAGRAM

CE130 DETACHABLE PANEL



MAIN FRAME EXPLODED DIAGRAM